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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,274	10/04/2005	Yukimasa Nagai	2611-0246PUS1	4018

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EXAMINER

PHAM, BRENDA H

ART UNIT	PAPER NUMBER
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2616

NOTIFICATION DATE	DELIVERY MODE
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03/17/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/552,274	NAGAI ET AL.	
	Examiner	Art Unit	
	BRENDA PHAM	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 58-92 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 72-75 is/are allowed.
- 6) ☒ Claim(s) 58-60, 63-67, 71, 76-78, 80-82, 85, 87-89 and 91 is/are rejected.
- 7) ☐ Claim(s) 61, 62, 68-70, 79, 83, 84, 86, 90 and 92 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/04/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 58-92 are pending in the application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 63 recites the limitation "wherein the data retransmitting includes" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 63 recites the limitation "wherein the data-retransmitting includes" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 64 recites the limitation "wherein the data retransmitting includes" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 58-60, 64, 67, 71, 76-78, 80-82, 85, 87-89 and 91 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Redi (US 6,556,582 B1).

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With respect to independent claims 58, 67, 76, 80, 85, 87 and 19, Redi discloses a communication system and method for a carrier-sense-multiple-access (CSMA) network including a radio terminal and a base station to which the radio terminal belongs, the communication method supporting request-to-send/clear-to-send (RTS/CTS) to prevent a collision of packets due to a hidden terminal, the communication method comprising (referring to Figure 5 and 7):

RTS-transmitting including the base station (Node 130) transmitting a request-to-send (RTS 720) frame to the radio terminal (Node 125) during a transmission-suspend-period in which the radio terminal suspends transmission to prevent the collision of packets;

RTR-transmitting (CTS 740) including the radio terminal (Node 125) transmitting a request to receive ((RTR) or Clear to sent) frame to the base station (Node 130) after the transmission-suspend-period has elapsed; and

data-transmitting including the base station (Node 130) transmitting a data frame to the radio terminal (Node 125) in response to the RTR frame or (CTS frame).

Redi discloses a system and method for collision avoidance in multi-hop packet radio networks. Although Redi does not expressly teach node 130 is a base station and node 125 is a radio terminal, base station and radio terminal are inherently included in Redi.

Alternatively, Redi teaches "For such a multi-hop wireless network to perform effectively, all nodes must, therefore, be prepared to route packets on behalf of other nodes.

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Therefore, it would have been obvious to implement node 130 as base station and node 125 as radio terminal in Redi.

With respect to claims 59, 77, 81, 88, Redi further teaches storing including the base station temporarily storing the data frame to be transmitted to the radio terminal ("**Input device 335 permits entry of data into wireless node 300 and output device 325 permits the output of wireless node data in video, audio, or hard copy format. Processing unit 320 performs all data processing functions for inputting, outputting, and processing of wireless node data. RAM 330 provides temporary working storage of node data**" (Col. 5, lines 24-25)).

With respect to dependent claims 60, 78, 82, 89, Redi further teaches wherein the storing includes the base station storing the data frame after the base station transmits the RTS frame to the radio terminal for a predetermined number of times ("After receipt of the NCTS packet, the sending node may wait until the receiving node sends an ACK message to the other node indicating the end of the data transfer before attempting to send another RTS packet" (col. 5, lines 60-65). In another word, the base station storing the data frame after the base station transmits the RTS frame to the radio terminal for a predetermined number of times before the base station is allowed to transmit data to the radio terminal).

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With respect to dependent claims 64 and 71, Redi further teach the base station (Node 130) transmitting the data frame to the radio terminal (Node 125) in response to the RTR frame (CTS); and

the radio terminal (Node 125) transmitting an acknowledgement (ACK) frame after having received the data frame (ACK 750).

Allowable Subject Matter

5. Claims 72-75 are allowed over prior arts made of record.
6. Claims 61-62, 68-70, 79, 83, 84, 86, 90 and 92 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 63, 65 and 66 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
8. The prior arts made of record and not relied upon is considered pertinent to applicant's disclosure.

McKay et al (US 5,844,905) disclose extension to distributed MAC protocol with collision avoidance using RTS/CTS exchange.

Hieda et al (US 5,592,483) disclose data communication apparatus achieving efficient use of the media.

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Garcia-Luna-Aceves et al (US 7,002,910 B2) disclose receiver-initiated channel-hopping (RICH) method for wireless communication networks.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda Pham whose telephone number is (571) 272-3135. The examiner can normally be reached on Monday-Friday from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild, can be reached on (571) 272-2092.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

March 5, 2008

/Brenda Pham/

Primary Examiner, Art Unit 2616